

HAL

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement and Compliance Assurance

IN THE MATTER OF:)
AMERICAN ELECTRIC POWER SERVICE) Notice of Violation
CORP., INDIANA MICHIGAN POWER CO.,) EPA- CAA-2000-HQ-0005
d/b/a AMERICAN ELECTRIC POWER; OHIO)
POWER CO., d/b/a AMERICAN ELECTRIC)
POWER; APPALACHIAN POWER CO., d/b/a)
AMERICAN ELECTRIC POWER; COLUMBUS &)
SOUTHERN OHIO ELECTRIC CO., d/b/a)
AMERICAN ELECTRIC POWER;)
CARDINAL OPERATING COMPANY; and)
CENTRAL OPERATING COMPANY.)
)
Proceedings Pursuant to)
Section 113(a)(1) of the)
Clean Air Act, 42 U.S.C.)
§7413(a)(1))
)

NOTICE OF VIOLATION

This Notice of Violation ("Notice") is issued to American Electric Power Service Corporation ("AEP"); Indiana Michigan Power Company, d/b/a American Electric Power; Ohio Power Company, d/b/a American Electric Power; Appalachian Power Company, d/b/a American Electric Power; Columbus & Southern Ohio Electric Company, d/b/a American Electric Power; Cardinal Operating Company; and Central Operating Company (herein after referred to collectively as the "AEP Companies") for violations of the Clean Air Act ("Act"), 42 U.S.C. §§ 7401-7671q and §§ 7501-7515, at the coal-fired power plants identified below. The AEP Companies have embarked on a program of modifications intended to extend the useful life, regain lost generating capacity and/or increase capacity at their coal-fired power plants.

Commencing at various times since 1977 and continuing to today, the AEP Companies have modified and operated the coal-fired power plants identified below without obtaining New Source Review ("NSR") permits authorizing the construction and/or operation of physical modifications of their boiler units as required by the Act. In addition, for each physical modifications at these power plants, the AEP Companies operated these modifications without installing pollution control equipment required by the Act. These violations of the Act and the State Implementation Plans ("SIPs") of Indiana, Ohio, and West Virginia have resulted in the release of massive amounts of sulfur

dioxide ("SO₂") nitrogen oxide ("NO_x"), and particulate matter ("PM") into the environment. Until these violations are corrected, the AEP Companies will continue to release massive amounts of illegal SO₂, NO_x, and PM into the environment.

This Notice is issued pursuant to Section 113(a) (1) of the Act, as amended, 42 U.S.C. §§ 7401-7671q. Section 113(a) of the Act requires the Administrator of the United States Environmental Protection Agency ("EPA") to notify any person in violation of a state implementation plan or permit of the violations. The authority to issue this Notice has been delegated to the Director, Air Enforcement Division, EPA Office of Enforcement and Compliance Assurance.

STATUTORY AND REGULATORY BACKGROUND

1. When the Clean Air Act was passed in 1970, Congress exempted existing facilities, including the coal-fired power plants that are the subject of this Notice, from many of its requirements. However, Congress also made it quite clear that this exemption would not last forever. As the United States Court of Appeals for the D.C. Circuit explained in Alabama Power v. Costle, 636 F.2d 323 (D.C. Cir. 1979), "the statutory scheme intends to 'grandfather' existing industries; but...this is not to constitute a perpetual immunity from all standards under the PSD program." Rather, the Act requires grandfathered facilities to install modern pollution control devices whenever the unit is proposed to be modified in such a way that its emissions may increase.
2. The NSR provisions of Parts C and D of Title I of the Clean Air Act require preconstruction review and permitting for modifications of stationary sources. See 42 U.S.C. §§ 7470-7492 and 7501-7575, respectively. Pursuant to applicable regulations, if a major stationary source is planning upon making a major modification, then that source must obtain either a PSD permit or a nonattainment NSR permit, depending on whether the source is located in an attainment or a nonattainment area for the pollutant being increased above the significance level. If a major stationary source is planning upon making a modification that is not major, it must obtain a general, or "minor" NSR permit regardless of its location. To obtain the required permit, the source must agree to put on Best Available Control Technology ("BACT") for an attainment pollutant or achieve Lowest Achievable Emission Rates ("LAER") in a nonattainment area, or, in the case of a modification that is not major, must meet the emission limit called for under the applicable minor NSR program.
3. Pursuant to Part C of the Act, the SIPs of Ohio, Indiana and West

Virginia require that no construction or operation of a major modification of a major stationary source occur in an area designated as attainment without first obtaining a permit under the Prevention of Significant Deterioration ("PSD") regulations. See 40 C.F.R. § 52.21 and 40 C.F.R. § 52.1884 for Ohio; 40 C.F.R. § 52.21 and 40 C.F.R. § 52.793 for Indiana and 45 C.S.R. § 14-6.1 for West Virginia.

4. Pursuant to Part D of the Act, the Indiana SIP requires that no construction or operation of a major modification of a major stationary source shall occur in an area designated as nonattainment without first obtaining a permit under APC 19, approved Feb. 16, 1982, 40 C.F.R. § 52.770(c)(24) and 326 Indiana Administrative Code (IAC) 2-1 and 2-3, approved Oct. 7, 1994, 40 C.F.R. § 52.770(c)(94).
5. Pursuant to Part D of the Act, the Ohio SIP requires that no construction or operation of a major modification of a major stationary source shall occur in an area designated as nonattainment without first obtaining a permit under the Ohio Administrative Code (OAC) 3745-31, approved Oct. 31, 1980 (45 Fed. Reg. 72119) and Sept. 8, 1993 (58 Fed. Reg. 47211).
6. Pursuant to Section 110(a)(2)(C) of the Act, the Indiana SIP requires that no person shall commence construction or modification of any source or facility without first applying for and obtaining a construction permit ("minor NSR"). See APC 19 and 326 IAC 2-1.
7. Pursuant to Section 110(a)(2)(C) of the Act, the Ohio SIP requires that no person shall commence construction or modification of any source or facility without first applying for and obtaining a construction permit ("minor NSR"). See OAC 3745-31.
8. Pursuant to Section 110(a)(2)(C) of the Act, the West Virginia SIP requires that no person shall commence construction or modification of any source or facility without first applying for and obtaining a construction permit ("minor NSR"). See 45 C.S.R. § 13-4.
9. The SIP provisions identified in this section are all federally enforceable pursuant to Sections 110 and 113 of the Act.

FACTUAL BACKGROUND

10. The AEP Companies are owners and/or operators of the facilities that are the subject of this Notice.
11. AEP and Ohio Power Company operate the Muskingum River Station Plant, a

fossil fuel-fired electric utility steam generating plant located at County Road 32, Beverly, Ohio in Waterford Township, Washington County, and Center Township, Morgan County. The plant consists of 5 boiler units with 1531 megawatt (MW) total generating capacity with unit start-up dates of 1953, 1954, 1957, 1958, and 1968, respectively.

12. The Muskingum River Station Plant Units 1 through 4, are located in Washington County an area that has the following attainment classifications from 1978 to the present:

| | | |
|-----------------------|------------|-------------------------------|
| For NO ₂ : | 1978-1999: | Attainment/Unclassifiable, |
| For SO ₂ : | 1978-1999: | Nonattainment |
| For PM: | 1978-1981: | Nonattainment (secondary TSP) |
| | 1982-1991: | Attainment |
| | 1992-1993: | Nonattainment (primary TSP) |
| | | Unclassifiable (PM10) |
| | 1994-1999: | Unclassifiable |
| For O ₃ | 1978-1999: | Attainment |

The Muskingum River Station plant Unit 5, is located in Morgan County, an area that has the following attainment classifications from 1978 to the present:

| | | |
|-----------------------|------------|--|
| For NO ₂ : | 1978-1999: | Attainment/Unclassifiable |
| For SO ₂ : | 1978-1999: | Nonattainment |
| For PM: | 1978-1981: | Nonattainment (secondary TSP) |
| | 1982-1991: | Attainment (primary and secondary TSP) |
| | 1992-1993: | Nonattainment (primary TSP) |
| | | Unclassifiable (PM10) |
| | 1994-1999: | Unclassifiable |
| For O ₃ : | 1978-1999: | Attainment |

13. AEP, Ohio Power Company, and Cardinal Operating Company operate the Cardinal Power Plant, a fossil fuel-fired electric utility steam generating plant located at 306 Jefferson County Road 7 East, Brilliant, Ohio in Wells Township, Jefferson County. The plant consists of 3 boiler units with 1800 MW total generating capacity with unit start-up dates of 1967, 1967, and 1977, respectively.

14. The Cardinal Power Plant is located in an area that has the following attainment classifications from 1980 to the present:

| | | |
|-----------------------|------------|---------------------------|
| For NO ₂ : | 1980-1999: | Attainment/Unclassifiable |
| For SO ₂ : | 1980-1999: | Nonattainment |
| For PM: | 1980-1993: | Nonattainment |

1993-1999: Unclassifiable for PM10
For O₃: 1980-1999: Attainment

15. AEP and Columbus & Southern Ohio Electric Company (C&SOE Company) operate the Conesville Power Plant, a fossil fuel-fired electric utility steam generating plant located at 47201 cr 273, Conesville, Ohio in Franklin Township, Coshocton County. The plant consists of 6 boiler units with 2175 MW total generating capacity with unit start-up dates of 1959, 1957, 1962, 1973, 1976, and 1978, respectively.

16. The Conesville plant is located in an area that has the following attainment classifications from 1979 to the present:

For NO₂: 1979-1999: Attainment
For SO₂: 1979-1999: Nonattainment
For TSP: 1978-1996: Attainment
For PM₁₀: 1996-1999: Unclassifiable
For O₃: 1980-1999: Attainment

17. AEP and Indiana Michigan Power Company operate the Tanners Creek Plant, a fossil fuel-fired electric utility steam generating plant located at I & M Street, Lawrenceburg, Indiana in Lawrenceburg Township, Dearborn County. The plant consists of 4 boiler units with 1100 MW total generating capacity with unit start-up dates of 1951, 1952, 1954, and 1964, respectively.

18. The Tanners Creek Plant is located in an area that has the following attainment classifications from 1978 to the present:

For NO₂: 1978-1999: Attainment
For SO₂: 1978-1999: Attainment
For TSP: 1978-1996: Nonattainment
For PM₁₀: 1996-1999: Unclassifiable
For O₃: 1978-1999: Attainment

19. AEP, Central Operating Company, Appalachian Power Company and Ohio Power Company own and/or operate the boiler units at the Philip Sporn plant, a fossil fuel-fired electric utility steam generating plant located at New Haven, Mason County West Virginia. The plant consists of five boiler units with 1105 MW total generating capacity. The Philip Sporn Plant began operation in 1950.

20. The Philip Sporn Plant is located in an area that has the following attainment classifications from 1980 to the present:

For NO₂: 1980-1999: Attainment
For SO₂: 1980-1999: Attainment
For PM: 1980-1999: Attainment
For O₃: 1980-1999: Attainment

21. Ohio Power Company owns and operates the boiler units at the Mitchell plant, a fossil fuel-fired electric utility steam generating plant located at Moundsville, Marshall County West Virginia. The plant consists of two boiler units which have a total generating capacity of 1670 MW and began operation in 1970 and 1971, respectively.
22. The Mitchell plant is located in an area that has the following attainment classifications from 1980 to the present:
- For NO₂ 1980-1999: Attainment
For SO₂ 1980-1999: Attainment
For PM: 1980-1999: Attainment
For O₃ 1980-1999: Attainment
23. Each of the plants identified in 9-22 above emits or has the potential to emit at least 100 tons per year of NO_x, SO₂ and PM and is a major emitting stationary source under the Act.

FINDING OF VIOLATIONS

Ohio Facilities

Muskingum River Station

24. Between 1979 and the date of this Notice, AEP and Ohio Power Company have made "modifications" as defined by § 52.21(b) and OAC 3745-31 at the Muskingum River Station Plant. These modifications included, but are not limited to, the following individual modifications or projects:
- (1) replacement of primary air fans at Units 1 and 2 during approximately 1981;
 - (2) replacement of the entire inlet and outlet tube assemblies for the secondary superheaters at Units 1 and 2 constructed during approximately 1988;
 - (3) replacement of primary roof tubing at Units 1 and 2 constructed from approximately 1988 through 1990;
 - (4) installation of high pressure turbine inner shell and nozzle for HP turbine at Unit 2 during approximately 1991;
 - (5) replacement of secondary superheater outlet, reheat inlet, intermediate, and outlet platens and installation of complete re-entrant

- throat tube assemblies, casing, and cyclone attachments at Units 3 and 4 during approximately 1980 to 1981;
- (6) replacement of furnace floor tubing at Unit 3 during approximately 1985;
 - (7) replacement of furnace floor tubing at Unit 4 during approximately 1989;
 - (8) replacement and design upgrade of 5 cyclone furnaces, primary burners, and related equipment at Units 3 and 4 from approximately 1987 to 1989;
 - (9) replacement of secondary superheater outlet headers and legs at Units 3 and 4 during approximately 1989 to 1990;
 - (10) replacement of furnace rear wall, rear arch, side walls and headers at Units 3 and 4 during approximately 1997;
 - (11) replacement and redesign of five pulverizers and the addition of ten burners constructed on the front and rear walls of the primary furnace at Unit 5 from approximately 1979 through 1980;
 - (12) removal of the horizontal primary superheater from Unit 5 and the addition of wingwalls and a redesigned horizontal reheater at Unit 5 to increase the Unit's capacity during approximately 1980 to 1981;
 - (13) replacement of furnace hopper slope complete with structural members at Unit 5 during approximately 1980.
 - (14) replacement and redesign of upgraded economizer at Unit 5 during approximately 1985;
 - (15) replacement of five 700 HP primary air fan motors with 900 HP primary air fan motors at Unit 5 during approximately 1988;
 - (16) replacement of high pressure feedwater heaters at Unit 5 during approximately 1989;
 - (17) replacement of first reheat superheater outlet bank and installation of lower furnace tubes at Unit 5 during approximately 1992.
25. For each of the modifications listed above that occurred at the Muskingum River Station Plant, neither AEP nor Ohio Power Company obtained a PSD permit pursuant to 40 C.F.R. § 52.21(i), a nonattainment NSR permit pursuant to OAC 3745-31, or a minor NSR permit pursuant to OAC 3745-31. In addition, for modifications after 1992, no information was provided to the permitting agency of actual emissions after the modification as required by 40 C.F.R. § 52.21(b)(21)(v).

Cardinal Power Plant

26. Between 1979 and the date of this Notice, AEP, Ohio Power Company, and Cardinal Operating Company have made "modifications" as defined by 40 C.F.R. § 52.21(b) and OAC 3745-31 at the Cardinal Power Plant. These modifications included, but are not limited to, the following individual modifications or projects:

- (1) replacement and redesign of five pulverizers and the addition of ten burners constructed on the front and rear walls of the primary furnace at Unit 1 during approximately 1980 to 1981;
- (2) the removal of the horizontal primary superheater and the addition of new wingwalls and a redesigned horizontal reheater at Unit 1 during approximately 1981 to 1982;
- (3) replacement and redesign of economizer and casing at Unit 1 during approximately 1989;
- (4) replacement of hot and cold air heater baskets and high pressure feed-water heaters at Unit 1 during approximately 1990;
- (5) replacement of lower furnace tubing at Unit 1 during approximately 1992;
- (6) replacement of main condenser tubes at Unit 1 during approximately 1993;
- (7) replacement of high pressure feedwater heaters at Unit 1 during approximately 1994.
- (8) replacement and redesign of five pulverizers and the addition of ten burners constructed on the front and rear walls of the primary furnace at Unit 2 during approximately 1979 to 1980;
- (9) the removal of the horizontal primary superheater and the addition of wingwalls and a redesigned horizontal reheater at Unit 2 during approximately 1980 to 1981;
- (10) replacement and redesign of economizer and casing at Unit 2 during approximately 1989;
- (11) replacement of hot and cold air heater baskets and feed-water heaters at Unit 2 during approximately 1989;
- (12) replacement of main condenser tubes at Unit 2 during approximately 1992;
- (13) replacement of lower furnace tubing at Unit 2 during approximately 1993;
- (14) replacement of high pressure feed-water heaters at Unit 2 during approximately 1994;
- (15) replacement of five 700 HP primary air fan motors with 900 HP primary air fan motors at Units 1 and 2 during approximately 1987.
- (16) installation of rotating blades at Unit 3 during approximately 1987;
- (17) replacement of hot and cold air heater baskets at Unit 3 during approximately 1989;
- (18) installation of new designed casing in the high pressure turbine inner shell at Unit 3 during approximately 1992;
- (19) replacement of lower main condenser tubes at Unit 3 during approximately 1993; and
- (20) installation of new ID fan motors at Unit 3 during approximately 1998.